WORKPLACE SAFETY AND HEALTH IN VIRGINIA

From The
National Institute for Occupational Safety and Health

State Profile 2002

Delivering on the Nation's promise:
Safety and health at work for all people through prevention.

The National Institute for Occupational Safety and Health

NIOSH is the primary federal agency responsible for conducting research and making recommendations for the prevention of work-related illness and injury. NIOSH is located in the Department of Health and Human Services in the Centers for Disease Control and Prevention. The NIOSH mission is to provide national and world leadership to prevent work-related illness, injury, disability, and death by gathering information, conducting scientific research, and translating the knowledge gained into products and services. As part of its mission, NIOSH supports programs in every state to improve the health and safety of workers. NIOSH has developed this document to highlight recent NIOSH programs important to workers and employers in Virginia.

The Burden of Occupational Illness and Injury in Virginia

- In Virginia, there are approximately 3.5 million individuals employed in the workforce.[1]
- In 2000, 148 workers died as a result of workplace injuries.[2]
- The construction industry had the highest number of fatalities, followed second by the services industry and the transportation and public utilities industry, and third by manufacturing.[2]
- In 1999, the most recent year for which data are available, the rate of fatal workplace injuries was 4.2 deaths per 100,000 workers – below the national average rate of 4.5 deaths per 100,000 workers.[2]
- In 2000, there were 146,500 nonfatal workplace injuries and illnesses in Virginia.[3]

The Cost of Occupational Injury and Illness in Virginia

In 2000, the most recent year for which data are available, a total of $534 million was paid for workers' compensation claims by Virginia private insurers and self-insured employers.[4] This figure does not include compensation paid to workers employed by the federal government and also underestimates the total financial burden for private sector businesses, since only a fraction of health care costs and earnings lost through work injuries and illnesses is covered by workers' compensation. Chronic occupational illnesses like cancer are substantially under-reported in workers' compensation systems because work-relatedness is often difficult to establish.

How NIOSH Prevents Worker Injuries and Diseases in Virginia

Health Hazard Evaluations (HHEs) and Technical Assistance

NIOSH evaluates workplace hazards and recommends solutions when requested by employers, workers, or state or federal agencies. Since 1993, NIOSH has responded to 67 requests for HHEs in Virginia in a variety of industrial settings, including the following example:

Richmond, Virginia: Fiber and Solvent Exposures of Rayon Production Workers
In 2000, NIOSH responded to a request for an HHE from workers at a rayon production facility in Richmond, Virginia. The request indicated that employees working in a para-aramid fiber production area were experiencing infected glands, sore throats, and other infections that they believed were due to workplace exposures. Environmental monitoring showed that dust, fibers, and sulfuric acid were well below available guidelines or standards. While the symptoms reported were non-specific and could not be directly related to specific exposures in the areas evaluated, it is possible that concentrations of workplace contaminants were elevated in the past and have contributed to reported symptoms. NIOSH recommendations to managers included: properly maintaining the ventilation system; educating employees about workplace contaminants; monitoring health problems reported by employees; and evaluating tasks in order to reduce task-related exposures. Recommendations to employees included reporting exposures and health problems and avoiding contact with contaminated gloves or clothing.

Fatality Assessment and Control Evaluation (FACE) Investigations

NIOSH developed the FACE program to identify work situations with a high risk of fatality and to formulate and disseminate prevention strategies. Since 1995, there have been 25 FACE investigations in Virginia, including the following example:

Virginia: Laborer Run Over by Dump Truck
On July 7, 1998, a 35-year-old male laborer was run over by a dump truck during resurfacing operations on a two-lane municipal road. NIOSH investigators concluded that to prevent similar incidents in the future, employers should: ensure that workers remain clear of moving equipment; ensure that only workers necessary to the job at hand be in the area; consider the use of electronic signaling devices or sensors to warn equipment operators of the presence of pedestrians; consider requiring pedestrian workers to wear high visibility headgear of standardized color; and better evaluate the placement of auxiliary equipment in vehicle cabs.

Fire Fighter Fatality Investigation and Prevention Program

The purpose of the NIOSH Fire Fighter Fatality Investigation and Prevention Program is to determine factors that cause or contribute to fire fighter deaths suffered in the line of duty. NIOSH uses data from these investigations to generate fatality investigation reports and a database of case results that guides the development of prevention and intervention activities. Since 1997, there have been three fire fighter fatality investigations in Virginia, including the following example:

Virginia: Volunteer Fire Fighter Dies During Motor-Vehicle Incident
On December 18, 1999, a 22-year-old volunteer fire fighter was injured when the rescue truck he was driving veered off the road, striking an oncoming car and then a tree. A 30-year-old volunteer district chief riding with him was killed. The incident occurred when the driver looked down at the dashboard to shut off the truck's lights and siren while responding to a reported gas leak at a private residence. The truck's right side tires dropped off the road surface into a ditch. Trying to bring the truck back onto the roadway, the driver

caused the truck to strike an oncoming car and then a tree. NIOSH investigators concluded that to minimize the risk of similar occurrences, drivers should operate fire department vehicles safely under all conditions. In addition, fire departments should ensure that equipment (e.g. radios and map card boxes) added to an apparatus does not interfere with the driver's ability to operate controls.

Building State Capacity

Graduate Training Program

A NIOSH grant supports a graduate program in safety engineering in the Department of Industrial and Systems Engineering at Virginia Polytechnic Institute and State University. In fiscal year 2001, five students were enrolled and two students were graduated.

Extramural Programs Funded by NIOSH

The following are examples of recent research grants, training grants, or cooperative agreements funded by NIOSH in the state of Virginia.

Occupational Safety of Older Workers

A significantly high percentage of the active civilian labor force will reach the age of 55 over the next five to ten years. Given the change in muscular strength and physiology of older adults, it is important to reevaluate the ergonomic design of workstations and workers' duration of exertion. NIOSH is funding a study at the Virginia Polytechnic Institute and State University that aims to reduce the economic and medical costs associated with workplace injuries of older workers.

Effects of Physical Conditioning on Lifting Biomechanics

Occupational low back disorders (LBDs) are the leading cause of lost work days and the most costly occupational safety and health problem facing industry today. Epidemiologic surveys demonstrate that exercise and physical conditioning may act as a prophylaxis to reduce the incidence of occupational LBDs. How and why exercise and physical conditioning influence LBD risk remains unknown. With support from NIOSH, researchers at the University of Virginia will conduct a study, the first randomized-control study of its kind, to quantify how exercise and physical conditioning modify the biomechanics of lifting in manual materials handling and lifting tasks. Quantifying how physical conditioning reduces low-back injury risk will help identify individuals at increased risk for LBDs and improve the intervention methods for control of occupational LBDs.

Additional information regarding NIOSH services and activities can be accessed through the NIOSH home page at http://www.cdc.gov/niosh/homepage.html or by calling the NIOSH 800-number at 1-800-356-NIOSH (1-800-356-4674).

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[1]U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics, Current Population Survey, 2000.

[2]DOL, BLS in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1999-2000.

[3]DOL, BLS in cooperation with participating state agencies, Survey of Occupational Injuries and Illnesses, 2000.

[4]National Academy of Social Insurance, *Workers' Compensation: Benefits, Coverage, and Costs, 2000 New Estimates,* May 2002.

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